

1921. *Exilia kelseyi* (Dall), Bull. 112, U. S. Nat. Mus., p. 92.
1940. *Exilioidea kelseyi* Bentson, Univ. California Publ. Bull. Dept. Geol. Sci., vol. 25, p. 225.

The type of this species, U.S.N.M. No. 110631, was dredged by F. W. Kelsey in 50 fms. off San Diego. The dissection of 2 specimens, U.S.N.M. No. 224346, dredged by the *Albatross* at station 3172 in 62 fms. on sand bottom; bottom temperature 48° off Bodega Head, California, and another, U.S.N.M. No. 186069, dredged by J. H. Paine in 56 fms. off San Diego, shows parallel characters to *E. rectirostris*.

The animal is blind. The verge is long, extending through almost the whole length of a turn with the seminal groove on the lower side. No trace of a radula was found.

EXILIOIDEA RECTIROSTRIS HERTLEINI Bentson.

1940. *Exilioidea rectirostris hertleini* Bentson, Univ. California Publ. Dept. Geol. Sci., vol. 25, pp. 224-225, pl. 2, figs. 23, 24; pl. 3, fig. 3.

This subspecies, which was reported by Bentson, "has been found in the Pliocene of California from two localities: in the Wildeat formation of Humboldt County, loc. 1859, C. A. S. loc. 115; and at Fourth and Hill streets, Los Angeles, in the 'Fernando,' loc. 3030."

EXPLANATION OF FIGURES.—1, Shell of *Exilioidea kelseyi* (Dall). 2, Shell of *Exilioidea rectirostris* (Carpenter). 3, Operculum of *Exilioidea rectirostris*, outside view. 4, Operculum of *Exilioidea kelseyi* in profile. 5, Sketch of head and verge of *Exilioidea kelseyi*. 6, Sketch of head and verge of *Exilioidea rectirostris*.

TWO NEW SPECIES, ONE NEW SUBSPECIES
AND ONE NEW NAME OF CHINESE
VIVIPARIDAE

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In working on the collection of the Chinese Viviparidae in the United States National Museum, two species and one subspecies

were found to be undescribed. Also one described species was found to be in need of a valid name.

I wish here to express my appreciation to the authorities of the United States National Museum for the opportunity to study their collections and especially to thank Dr. Paul Bartsch for his guidance in this work.

VIVIPARUS SUIFUENSIS, new species, plate 7, fig. 1.

Shell rather large, strongly solid, elongate-ovate, olive green throughout excepting the aperture which is bluish. Nuclear whorls 2, small and convex. Postnuclear whorls 5, convex, and marked by microscopic spiral lirations of which 8 occur on the third, 12 on the fourth and fifth, 13 on the penultimate and 14 on the last whorl; they are most prominent in the fourth whorl. Suture well impressed. Umbilicus absent. Aperture pyriform, ovate; peristome simple, moderately thick, well expanded, and tinged internally with black along the edge; parietal wall thickly calloused; columella concave and thickly calloused. The operculum is thin, ovate, with subcentral nucleus toward the left. The radula has the formula: 5-1-5:4-1-4:4-1-5:20.

The type, United States National Museum Cat. No. 573611, was collected by Rev. D. C. Graham in Suifu (Ipin), Szechuan Province, China, and yields the following measurements: No. of whorls 7; height 40.7 mm.; diameter 27.1 mm.; length of aperture 21.5 mm.

Two other specimens from the same source as the type, give the following additional information:

<i>No. of Whorls</i>	<i>Height (mm.)</i>	<i>Diameter (mm.)</i>	<i>Length of Aperture (mm.)</i>
6.8	32.9	23.9	18.8
6.5	29.8	22.2	16.3

This species resembles *Viviparus chinensis* Gray, but it is much thicker and more slender, and has no umbilicus.

VIVIPARUS PINGI, new species, Plate 7, fig. 2.

Shell rather small, solid, thick, ovate, dark olive brown throughout excepting the aperture which is purplish gray. Nuclear whorls decollated. Postnuclear whorls 2.4 remaining, convex, and marked by 4 evenly spaced spiral cords on each whorl.

A spiral liration is present between the middle two cords of the body whorl. Suture deeply excavated and well constricted. Periphery inflated and strongly rounded. Base short, well rounded and marked by 5 spiral lirations. Umbilicus obsolete. Aperture pyriform, well angled posteriorly and broadly ovate anteriorly; peristome simple, thick, well expanded and tinged with black along the edge; parietal wall slightly calloused; columella concave. Operculum thin, horny, with subcentral nucleus toward the left. The radula has the formula: 5-1-5:4-1-4:5-1-4:25.

The type, United States National Museum Cat. No. 333887, was collected by C. Ping at Foochow, Fukien Province, China, and yields the following measurements: Height 26.1 mm.; diameter 20.8 mm.; length of aperture 16.1 mm.

Two other specimens from the same source as the type, give the following additional information.

<i>No. of Whorls</i>	<i>Height (mm.)</i>	<i>Diameter (mm.)</i>	<i>Length of Aperture (mm.)</i>
4.0	22.8	18.3	14.5
2.6	21.9	19.5	14.4

This species resembles *Viviparus quadratus* Benson, but it is much thicker and has a larger body whorl, and its umbilicus is obsolete.

VIVIPARUS QUADRATUS GRAHAMI, new subspecies, Pl. 7, fig. 3

Shell small, thin, elongate-ovate, olive green throughout. Nuclear whorls 1.5 convex. Postnuclear whorls 4, well convex, and marked by two spiral brown bands of which one appears on the summit while the other is just above the periphery. The sculpture consists of spiral lirations of which 3 occur on the third, 8 on the penultimate and last whorls. Suture well impressed, periphery inflated and strongly rounded. Base short, well rounded and marked by 20 microscopic spiral lirations. Umbilicus moderately perforated. Aperture ovate, nearly round, bluntly angled posteriorly and broadly rounded anteriorly; peristome simple, thin; parietal wall slightly calloused; columella slightly concave. Operculum thin, horny, pyriform, with subcentral nucleus toward the left. The radula has the formula: 4-1-4:5-1-5:5-1-5:18.

The type, United States National Museum Cat. No. 334007, was collected by Rev. D. C. Graham from Suifu (Ipin), Szechuan Province, China, and gives the following measurements: No. of

whorls 5.5; height 26.8 mm.; diameter 19.0 mm.; length of aperture 14.1 mm.

Selected specimens, from the same source as the type, give the following additional information:

<i>No. of Whorls</i>	<i>Height (mm.)</i>	<i>Diameter (mm.)</i>	<i>Length of Aperture (mm.)</i>
6.0	23.8	16.2	11.8
5.4	24.4	16.8	12.4
5.5	19.7	14.5	10.5

Average of 15 specimens: whorls 5.5; height 19.6 mm., diameter, 14.2 mm., length of aperture 10.2 mm.

This subspecies resembles *Viviparus quadratus* Benson very much, but it has two spiral brown bands and a straighter columella.

VIVIPARUS NINGKUOENSIS, new name.

Paludina heudei Ping, 1938, Contr. Biol. Lab. Sci. Soc. China, Nanking, Zool. 13, 1, p. 2, figs. 1 and 2. (Not *Vivipara quadrata heudei* Dautzenberg and Fischer, 1905.)

I take the liberty to rename this species after the type locality.

NOTES AND NEWS

THE GENOTYPE OF *ARCA*.—Opinion 189. The International Commission on Zoological Nomenclature has decided: "Under suspension of the rules:—(i) to set aside all type designations for *Arca* Linnaeus, 1758, Syst. Nat. (ed. 10) 1:693 (Class Pelecypoda, Order Filibranchiata), made prior to the date of this *Opinion*; and (ii) to designate *Arca noae* Linnaeus, 1758, Syst. Nat. (ed. 10) 1:693, as the type of *Arca* Linnaeus, 1758."

OTESIA H. & A. ADAMS *versus* VITRINULA "GRAY" CARPENTER.—In the B. M. Catalogue, Pulmonata, p. 65 (1855), Dr. Gray established a new genus, *Vitrinella*, for two Celebes land snails, *Helix flammulata* Q. & G. and *Vitrina viridis* Q. & G. As that generic name had been used by C. B. Adams in 1850 for a group of Jamaican marine shells, the brothers Adams (Genera of Recent Mollusca 2: 642, Nov., 1858) proposed the new name *Otesia*